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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,475	12/28/2004	Keisuke Kawamura	263788US2PCT	2692

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EXAMINER	
ARANCIBIA, MAUREEN GRAMAGLIA	

ART UNIT	PAPER NUMBER
1763	

NOTIFICATION DATE	DELIVERY MODE
07/27/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/519,475

Applicant(s)

KAWAMURA ET AL.

Examiner

Maureen G. Arancibia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species A, Claims 1-7, 10, and 11 in the reply filed on 7 May 2007 is acknowledged.
2. Claims 8 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7 May 2007.

Claim Objections

3. Claim 5 is objected to because of the following informalities: Line 4 should be corrected to read "a change". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-3, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application Publication EP 0955665A2 (from Applicant's IDS) to Murata et al.**

In regards to Claims 1-3, 10, and 11, Murata et al. teaches a method of plasma CVD in a plasma CVD apparatus (Figure 1) with which high-frequency electric power generated by a high-frequency electric power feeding circuit 36 is fed to a plurality of discharge electrodes (rungs of ladder electrode 32; Figure 2), and plasma is generated

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between the discharge electrodes and a substrate 33 which are in a film formation chamber 31 into which a gas for forming a film containing a substance has been introduced through gas discharge ports 37a, so as to vapor deposit the substance on the substrate (Paragraph 35), the apparatus comprising a voltage distribution regulator 61a-61h for adjusting deviation in distribution of voltage on the discharge electrodes, the distribution of voltage occurring in a direction at right angles to a direction of fed electric power through the discharge electrode (Figure 2), wherein the distribution of the voltage at an end part of the substrate and a central part of the substrate are balanced so that plasma is made uniform over the entirety of the substrate (ex. Table 1), and wherein the voltage distribution regulator comprises impedance changers provided to each of the plurality of high-frequency cables for supplying the high frequency power to the plurality of discharge electrodes (Figure 1; Paragraphs 31-34).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. in view of U.S. Patent 6,417,079 to Yamakoshi et al.**

The teachings of Murata et al. were discussed above.

In regards to Claims 4 and 5, Murata et al. does not expressly teach that each impedance changer can be a stub comprising a branch cable which branches off from

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the respective high-frequency cable, or that the stub specifically comprises a passive element which is connected to a distal end of the branch cable, and with a change in a constant of the passive element, the stub changes the impedance at a feeding point for the respective discharge electrode toward the high-frequency electric power feeding circuit.

Yamakoshi et al. teaches that an impedance changer 413 can be a stub comprising a branch cable and passive elements (variable capacitor and variable inductor; Figure 7) connected to a distal end of the branch cable, and with a change in the respective constants of the variable passive load elements, the stub changes the impedance at a feeding point for a discharge electrode 303. (Figure 7; Column 11, Lines 13-27)

It would have been obvious to one of ordinary skill in the art to modify the apparatus taught by Murata et al. to have each impedance changer be a stub comprising a branch cable, as taught by Yamakoshi et al., and specifically to have passive elements connected to a distal end of the branch cable, wherein with a change in the respective constants of the variable passive load elements, the stub changes the impedance at a feeding point for a discharge electrode, as taught by Yamakoshi et al., as an art-recognized equivalent means of performing the impedance changing to the means taught by Murata et al. It has been held that an express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

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8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. in view of Yamakoshi et al. as applied to claim 4 above, and further in view of U.S. Patent Application Publication 2002/0134508 to Himori et al.

The teachings of Murata et al. and Yamakoshi et al. were discussed above in regards to Claim 4.

In regards to Claims 6 and 7, the combination of Murata et al. and Yamakoshi et al. does not expressly teach that a change in the cable length of the branch cable, or in the characteristic impedance of the branch cable, changes the impedance at a feeding point for the discharge electrode.

Himori et al. teaches that a change in the cable length of a branch cable 132 of a stub, by moving short-circuiting element 133, changes the characteristic impedance of the branch cable, as broadly recited in Claim 7, and thereby changes the impedance at a feeding point for a discharge electrode 122. (Figure 17; Paragraph 10)

It would have been obvious to one of ordinary skill in the art to modify the apparatus taught by the combination of Murata et al. and Yamakoshi et al. to instead have each stub comprise a branch cable with a moveable short-circuiting element, as taught by Himori et al., that changes the characteristic impedance of the branch cable, and thereby changes the impedance at a feeding point for a discharge electrode, as taught by Himori et al., as an art-recognized equivalent means of performing the impedance changing to the means taught by the combination of Murata et al. and Yamakoshi et al. It has been held that an express suggestion to substitute one

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equivalent component or process for another is not necessary to render such substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).


Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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